



AFCTN Test Report 94-074

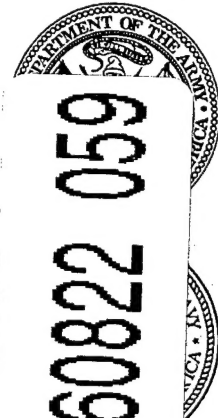
AFCTB-ID
94-025



Technical Publication
T O 12R2-2ARC208-112
Using:



O'Neil & Associates, Inc. Data
Supporting:



ESC/MSL MILSTAR Program
(Contract #F19628-89-C-0131)

MIL-D-28000A (IGES)
MIL-M-28001A (SGML)
MIL-R-28002A (Raster)
MIL-D-28003 (CGM)

Quick Short Test Report

05 April 1994



Prepared for
Electronic Systems Center
Air Force CALS Program Office
Det 2 HQ ESC/AV-2
4027 Colonel Glenn Hwy, Suite 300
Dayton, Ohio 45431-1672

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Quick Short Test Report

05 April 1994

Prepared By

Air Force CALS Test Bed
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Air Force CALS Test Bed

Notification of Test Results

05 April 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

O'Neil & Associates, Inc.

Identified as follows:

Title:	Technical Publication T O 12R2-2ARC208-112
Program:	ESC/MSL
Program Office:	MILSTAR
Contract No.:	F19628-89-C-0131
QSTR No.:	AFCTB-ID 94-025

Received on the following media: **9-Track Tape**

The results of the QSTR evaluation are as follows:

MIL-STD-1840A Standard	Pass
MIL-STD-1840A Media Format:	Pass
MIL-D-28000A IGES:	Pass
MIL-M-28001A SGML:	Pass
MIL-R-28002A Raster:	Pass
MIL-D-28003 CGM:	Pass

Formal results with associated disclaimer are documented and available from the AFCTB.

**Air Force CALS Test Bed
HQ ESC/AV-2P
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Phone: 513-257-3085 FAX: 513-257-5881**

Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	2
2.	Test Parameters.....	3
3.	1840A Analysis.....	7
3.1.	External Packaging.....	7
3.2.	Transmission Envelope.....	7
3.2.1.	Tape Formats.....	7
3.2.2.	Declaration and Header Fields.....	8
4.	IGES Analysis.....	8
5.	SGML Analysis.....	10
6.	Raster Analysis.....	11
7.	CGM Analysis.....	13
8.	Conclusions and Recommendations.....	15
9.	Appendix A - Tapetool Report Logs.....	16
9.1.	Tape Catalog.....	16
9.2.	Tape Evaluation Log.....	17
9.3.	Tape File Set Validation Log.....	18
9.4.	Other Tape Reading Logs.....	22
10.	Appendix B - Detailed IGES Analysis.....	23
10.1.	File D001Q015.....	23
10.1.1.	Parser/Verifier Log.....	23

10.1.2.	Parser Log - AutoCAD R12.....	29
10.1.3.	Parser Log - IGESWorks.....	34
10.1.4.	Preview Error Log.....	37
10.1.5.	Output Cadkey v5.02.....	38
10.1.6.	Output CADLeaf.....	39
10.1.7.	Output IGESView.....	40
10.1.8.	Output IGESWorks.....	41
10.1.9.	Output iges2draw/IslandDraw.....	42
11.	Appendix C - Detailed SGML Analysis.....	43
11.1.	Parser Log.....	43
11.2.	Exoterica XGMLNormalizer Parser.....	44
11.3.	Exoterica Validator.....	44
11.4.	Sema Mark-it Log.....	44
11.5.	Public Domain sgmls Log.....	44
12.	Appendix D - Detailed Raster Analysis.....	45
12.1.	File D001R024.....	45
12.1.1.	Output HiJaak Pro.....	45
12.1.2.	Output g42tiff/IslandPaint.....	46
12.1.3.	Output IGESView.....	47
13.	Appendix E - Detailed CGM Analysis.....	48
13.1.	File D001C001.....	48
13.1.1.	Parser Log MetaCheck.....	48
13.1.2.	validcgm Log.....	50
13.1.3.	Output CADLeaf.....	51

13.1.4.	Output cgm2draw/IslandDraw.....	52
13.1.5.	Output Designer.....	53
13.1.6.	Output Freelance.....	54
13.1.7.	Output Harvard Graphics.....	55
13.1.8.	Output HiJaak Pro.....	56
13.1.9.	Output IslandDraw v4.0.....	57
13.1.10.	Output Ventura Publisher.....	58

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze O'Neil & Associates' interpretation and use of the CALS standards, in transferring technical publication data. O'Neil used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 94-025

Date of
Evaluation: 05 April 1994

Evaluator: George Elwood
Air Force CALS Test Bed
DET 2 HQ ESC/AV-2P
4027 Colonel Glenn Hwy
Suite 300
Dayton OH 45431-1672

Data
Originator: Larry McKinley
O'Neil & Associates, Inc.
425 North Findlay Street
Dayton OH 45404-2203
(513) 461-1602

Data
Description: Technical Manual Test
1 Document Declaration file
4 Document Type Definitions (DTDs)
11 Initial Graphics Exchange Specification
(IGES) files
1 Text/Standard Generalized Markup Language
(SGML) file
15 Raster files
2 Computer Graphics Metafile (CGM) files

Data
Source System: 1840

HARDWARE

386 PC

SOFTWARE

AFCTN Tapetool v1.2.10

IGES

HARDWARE

Xerox 7650 Pro Imager 6500 W/S

SOFTWARE

Xerox Expert Drafting 5.0

IGES Convert v5.1

Xerox XTI v2.2

XEROX XPI Image Conversion 2.6

Text/SGML

HARDWARE

386 PC

SOFTWARE

WordPerfect Intellitag 1.0

Exoterica Validator 1.1

Raster

HARDWARE

Xerox 7650 Pro Imager
6085 Workstation

SOFTWARE

Xerox XTI v2.2

Xerox XPI Image Conversion 2.6

CGM

HARDWARE

HP/Apollo 425T

SOFTWARE

Auto-trol S5000/CGM 1.4

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.10 UNIX

XSoft CAPS/CALS v40.4

MIL-D-28000 (IGES)

HP 735

InterCAP X-Change v7.82

SGI Indigo2

AUTODESK AutoCAD R12

Cadkey Cadkey v6.0

IGES Data Analysis (IDA) CALSView

Sun SparcStation 2

ArborText iges2draw
Carberry CADLeaf Plus v3.1
IDA Parser/Verifier v93
IDA IGESView v3.05
International TechneGroup Incorporated
(ITI) IGES/Works v1.3
Rosetta Technologies Prepare
Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12
Cadkey Cadkey v6.0
IDA IGES Parser/Verifier v93
IDA IGESView Windows

MIL-M-28001 (SGML)

PC 486/50

Exoterica XGMLNormalizer v1.2e3.2
Exoterica Validator v2.0 ex1
McAfee & McAdam Sema Mark-it v2.3
Public Domain sgmls

MIL-R-28002 (Raster)

HP 735

AFCTN xrastb.hp
InterCAP X-Change v7.82

SGI Indigo2

AFCTN xrastb.sgi
IDA CALSView

SUN SparcStation 2

ArborText g42tiff
Carberry CADLeaf Plus v3.1
AFCTN validg4
AFCTN xrastb.sun4
IDA IGESView v3.0
Island Software IslandPaint v3.0

PC 486

AFCTN validg4
IDA IGESView Windows
Inset Systems HiJaak Pro
Expert Graphics RxHighlight v1.0

MIL-D-28003 (CGM)

HP 735

InterCAP X-Change v7.82

SGI Indigo 2

IDA CALSView

SUN SparcStation 2

ArborText cgm2draw

Carberry CADLeaf Plus v3.1

Island Software IslandDraw v3.0

Island Software IslandDraw v4.0

PC 486/50

Advanced Technology Center

(ATC) MetaCheck R 2.10

Software Publishing Corporation

(SPC) Harvard Graphics v3.05

Inset Systems HiJaak Pro

Lotus Freelance v2.01

Micrografx Designer v4.0

Corel Ventura Publisher

Standards

Tested:

MIL-STD-1840A

MIL-D-28000A

MIL-M-28001A

MIL-R-28002A

MIL-D-28003

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

The packaging of the tape meets the requirements defined in CALS MIL-STD-1840A.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool v1.2.10* utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using XSoft's *CAPS read1840A* utility without any reported errors. However, when evaluating the resulting files only one DTD was present. The automatic renaming function in XSoft's tape reading utility used the same file name, which caused each new file to over write the previous file.

The physical structure of the tape meets the requirements defined in CALS MIL-STD-1840A.

3.2.2 Declaration and Header Fields

No errors or warnings were reported in the Document Declaration file and data file headers. This portion of the tape meets the requirements defined in CALS MIL-STD-1840A.

4. IGES Analysis

The tape contained 11 IGES files. These files were visually inspected for the required conformance statement, which was found. All 11 IGES files were viewed on at least two different software applications, and a detailed analysis was conducted only on file D001Q016 due to the number of files submitted.

These files were evaluated using IDA's *Parser/Verifier* set for CALS Class I. No CALS errors were reported in the files. Basic IGES errors were reported. Investigation of the reported errors indicates that they did not impact the intended use of the files. The errors were lines and arcs that did not intersect. The errors were very small and not noticeable on the displayed and printed images.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The files were converted using ArborText's *iges2draw* utility with no reported errors. The resulting files were read into Island Software's *IslandDraw*, displayed and printed. Several files had only partial images displayed. The included output in Appendix B, Section 10 of this report highlights file Q016, which had the most noticeable partial image. The problem was traced to a single line placed on the left side of the image. The "bound data" command had no effect on the offset images. The files were unusable for illustration purposes.

According to Chris Moffett of ArborText, "This (or These) problem(s) may be due {to} the method in which the original file was generated."

The files were read using AUTODESK's AutoCAD R12 with translator version 5.1 without a reported error.

The files were converted using Cadkey's *ig2c* utility. The resulting files were read into Cadkey's *Cadkey* displayed and printed.

The files were read into Carberry's *CADLeaf* software without a reported error. Several files displayed only partial images. These were the same files which displayed partial images using *iges2draw/IslandDraw* software.

The files were read using IDA's *CALSVIEW*. No problems were reported or noted during the evaluation.

The files were read using IDA's *IGESVIEW* and *IGESVIEW for Windows*. No problems were reported or noted during this procedure.

The files were read using InterCAPS's *X-Change*. No problems were reported or noted.

The files were read using ITI's *IGESWORKS* with reported errors. See the log file in Appendix B, Section 10 for a sample of the errors. The files were displayed and printed. It was noted that the arrowheads for the selected files did not display or print.

The IGES files were converted using Rosetta Technologies' *Prepare* with reported errors. The resulting files were read into Rosetta Technologies' *Preview*, displayed and printed.

While the IGES files had no reported MIL-D-28000A errors, several files had offset images. The main problems were noted from the translations into a publishing system. The resulting image would not be usable. Basic IGES errors were noted but did not impact the displayed images.

5. SGML Analysis

The tape contained four DTDs and a text file. The DTDs were mapped as follows:

```
DOCSPEC (G003) --> BSPEC (G004)
                  |> CALSFIGS.SGM (G005)
                  |> CALSTABS.SGM (G006)
```

The AFCTB has several parsers available for evaluating submitted DTD and text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or text files required by each system are not documented in the report.

The text and DTD files from the tape were evaluated using another parser available within the AFCTB. This parser reported an error. When the error was evaluated the parser was found to be in error. The parser failed to correctly process an ignore command. The statement is shown below.

```
<!ENTITY % atos "IGNORE" >
```

The text and DTD files were evaluated using Exoterica's *Validator ex1* parser. No errors or warnings were reported.

The text and DTD files were tested using Exoterica's *XGML-Normalizer* parser. No errors or warnings were reported.

The text and DTD files were evaluated using McAfee & McAdam's *Sema Mark-it v2.3* parser. No errors or warnings were reported.

The text and DTD files were evaluated using the Public Domain *sgmls* parser. When the same files used above were parsed, *sgmls* went into a loop and the computer had to be reset. The structure of the external references were changed and the files were parsed. The parameters of the

sgmls were changed and an error log of between 3.2M and 5.8M resulted. In inspecting the logs the sgmls got lost in the "calsfigs.sgm" file and started reporting the same errors every two lines. A visual inspection of the files showed the structure was correct. The error problem associated with the sgml parser is being researched.

Because no Format Output Specification Instance (FOSI) was provided, publishing was not attempted.

The submitted text and DTD files meet the CALS MIL-M-28001A specification.

6. Raster Analysis

The tape contained 15 Raster files. All files were evaluated using the AFCTN *validg4* utility. This program reported all files meet the CALS MIL-R-28002A specification.

The files were read into the AFCTN *xrastb.sun4* viewing utility. No problems were noted.

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

Because of the number of Raster files only file D001R024 was printed. However, all files were viewed using at least one software application. In general, the white on black of all files made the images hard to see, and this could be carried over to the printed pages.

The files were converted using ArborText's *g42tiff* utility without a reported error. The resulting files were read into Island Software's *IslandPaint* displayed and printed.

The files were read into Carberry's *CADLeaf* software without a reported error. The images were displayed.

The files were read using IDA's *CALSTView*, displayed and printed.

The files were read into IDA's *IGESView* and *IGESView for Windows* without a reported error.

The files were read into Inset Systems' *HiJaak for Windows* without a reported error.

The files were read using InterCAP's *X-Change* without a reported error.

The files were converted using Rosetta Technologies' *Prepare* without a reported error. The resulting files were read into Rosetta Technologies' *Preview* and displayed.

The files were imported into Expert Graphics' *RxHighlight* and displayed without a reported error.

The Raster files meet the CALS MIL-R-28002A specification.

7. CGM Analysis

The tape contained two CGM files. The files were evaluated using ATC's *MetaCheck* with CALS options. This utility reported no CALS or basic CGM errors and the files meet the CALS MIL-D-28003 specification.

The files were evaluated using the beta AFCTN *validcgm* utility. This utility reported no errors.

The AFCTB has several tools for viewing CGM files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

A general comment on both files: All applications displayed the images initially black on black. The background color had to be changed or removed before the images were visible. Also noted was a wide range of text sizes in file D001C001.

The files were converted using ArborText's *cgm2draw* utility without a reported error. The resulting files were read into Island Software's *IslandDraw* v3.1, displayed and printed. The background had to be removed in order to see the image. The text size in file D001C001 exceeded the right margin.

The files were read into Carberry's *CADLeaf* software and displayed. The background color had to be changed in order to see the image. The text in file C001 exceeded the margin of the display.

The files were read into IDA's *CALSVIEW*. Because the background color could not be changed, nothing displayed.

The files were imported into Micrografx's *Designer* without a reported error. The text exceeded the right margin of the basic graphic. The background color had to be changed in order to display the image.

According to Michael Harrison of Micrografx, "Micrografx is aware of the problems associated with reading these files and is working on a solution to be implemented in a future release of our product.

The files were imported into Lotus' *Freelance* and displayed. The background color had to be removed in order to see the graphics. The text font appeared very small.

The files were imported into SPC's *Harvard Graphics v3.05* without a reported error. The background color had to be changed in order to see the image. The text in file C001 exceeded the right margin of the graphics.

The files were read into Inset Systems' *HiJaak Pro* without a reported error. The text in file C001 was outset down into the line and basic graphics.

The files were imported directly into Island Software's *IslandDraw v4.0* without a reported error. The image required work on the background in order to see the graphics.

The files were read into InterCAP's *X-Change* without a reported error. The black background had to be removed in order to see the image. This was accomplished by "painting" over the display area with other windows.

The files were imported into Corel's *Ventura Publisher* without a reported error. The background color problem was not noted. The selected text font for file C001 was very small.

While the CGM files were reported without error and meet the CALS MIL-D-28003 specification, the black background caused problems in almost every application used by the AFCTB. The text in file C001 was handled differently by most applications due to fonts ranging from very small to large.

8. Conclusions and Recommendations

The physical structure of the tape from O'Neil & Associates had no reported errors, and meets the requirements of ANSI 3.27 and the CALS MIL-STD-1840A.

The IGES files meet the CALS MIL-D-28001A specification. Some errors in displacement were noted. The basic IGES errors reported were not visual in the intended use of the files.

The text and DTDs files parsed without error using three different parsers, and meet the CALS MIL-M-28001A specification.

The Raster files meet the CALS MIL-R-28002A specification. However, the white on black image may cause problems when publishing.

The CGM files meet the CALS MIL-D-28003 specification. However, the black background had to be removed in most applications in order to make the image usable.

The tape meets the CALS MIL-STD-1840A requirements. While all files on the tape meet the required specifications, many applications within the AFCTB had problems with the files.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Apr 1 13:08:08 1994

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set054

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001C001	CGM	F/00080	00800/000003	Extracted
D001C002	CGM	F/00080	00800/000003	Extracted
D001G003	DTD	D/00260	02048/000002	Extracted
D001G004	DTD	D/00260	02048/000013	Extracted
D001G005	DTD	D/00260	02048/000002	Extracted
D001G006	DTD	D/00260	02048/000002	Extracted
D001Q007	IGES	F/00080	02000/000018	Extracted
<<<<< PART OF LOG FILE REMOVED HERE >>>>>				
D001R018	Raster	F/00128	02048/000008	Extracted
<<<<< PART OF LOG FILE REMOVED HERE >>>>>				
D001R032	Raster	F/00128	02048/000026	Extracted
D001T033	Text	D/00260	02048/000081	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Apr 1 13:07:21 1994

ANSI Tape Import Log

VOL1CALS01

4

Label Identifier: VOL1
Volume Identifier: CALS01
Volume Accessibility:
Owner Identifier:
Label Standard Version: 4

HDR1D001 CALS0100010001000000 94089 00000 000000

Label Identifier: HDR1
File Identifier: D001
File Set Identifier: CALS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0000
Generation Version Number: 00
Creation Date: 94089
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

End of Volume CALS01

End Of Tape File Set

Deallocating /dev/rmt0...

Tape Import Process terminated normally.

9.3 Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Fri Apr 1 13:08:08 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set054

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: O'Neil & Assoc. CAGE 83007

srcdocid: TO 12R2-2ARC208-112

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19940325

dstsys: Raytheon CAGE 49956

dstdocid: TO 12R2-2ARC208-112

dstrelid: NONE

dtetrm: 19940330

dlvacc: NONE

filcnt: C2,G4,Q11,R15,T1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: Technical Publication

doctl: NONE

Found file: D001C001

Extracting CGM Header Records...

Evaluating CGM Header Records...

srcdocid: TO 12R2-2ARC208-112

dstdocid: TO 12R2-2ARC208-112

txtfilid: W

figid: INTRO-CAUTION-ESD

srcgph: ESDCAU

doccls: UNCLASSIFIED

notes: NONE

Saving CGM Header File: D001C001_HDR

Saving CGM Data File: D001C001_CGM

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

Found file: D001G003
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
notes: DOCSPEC.DTD This DTD has 4 parts

Saving DTD Header File: D001G003_HDR
Saving DTD Data File: D001G003_DTD

Found file: D001G004
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
notes: BSPEC.DTD

Saving DTD Header File: D001G004_HDR
Saving DTD Data File: D001G004_DTD

Found file: D001G005
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
notes: calsfigs.sgm

Saving DTD Header File: D001G005_HDR
Saving DTD Data File: D001G005_DTD

Found file: D001G006
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
notes: calstabs.sgm

Saving DTD Header File: D001G006_HDR
Saving DTD Data File: D001G006_DTD

Found file: D001Q007
Extracting IGES Header Records...

Evaluating IGES Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
txtfilid: W
figid: 3-1
srcgph: M0703
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D001Q007_HDR
Saving IGES Data File: D001Q007_IGS

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

Found file: D001R018
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
txtfilid: W
figid: 1-1
srcgph: M0701
doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 001671,001686
rdensty: 0300
notes: NONE

Saving Raster Header File: D001R018_HDR
Saving Raster Data File: D001R018_GR4

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

Found file: D001T033
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: TO 12R2-2ARC208-112
dstdocid: TO 12R2-2ARC208-112
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D001T033_HDR
Saving Text Data File: D001T033_TXT

Evaluating numbering scheme...

No errors were encountered during numbering scheme evaluation.

Numbering scheme evaluation complete.

Checking file count...

No errors were encountered during file count verification.

File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.4 Other Tape Reading Logs

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001' ---  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
ESDCAU.C.cgm'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
TXTRES.D.C.cgm'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
TO12R22ARC208112.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
TO12R22ARC208112.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
TO12R22ARC208112.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
TO12R22ARC208112.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
M0703.Q.igs'.
```

<<<< PART OF LOG FILE REMOVED HERE >>>>

```
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
M0702.R.cci'.
```

<<<< PART OF LOG FILE REMOVED HERE >>>>

```
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
M07B26.R.cci'.  
/cals/caps/Bin/read1840A: writing data file '9425/TO12R2-2ARC208-1/  
W.T.sgm'.  
-- declaration file indicates 1 files of type T  
-- declaration file indicates 4 files of type G  
-- declaration file indicates 0 files of type H  
-- declaration file indicates 11 files of type Q  
-- declaration file indicates 15 files of type R  
-- declaration file indicates 2 files of type C  
-- declaration file indicates 0 files of type X  
-- declaration file indicates 0 files of type P  
-- declaration file indicates 0 files of type Z
```

10. Appendix B - Detailed IGES Analysis

10.1 File D001Q015

10.1.1 Parser/Verifier Log

```
*****
****  IGES PARSER/VERIFIER  ****
****      MARCH 1993      ****
****  IGES Data Analysis  ****
****      (708) 344-1815  ****
*****
```

Input file is q016.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is April 1, 1994 5:16 PM

```
*****
****  CHECK FILE SYNTAX  ****
*****
```

Section	Records
Start	5
Global	3
Directory	708 (354 Entities)
Parameter	415
Terminate	1

No syntax errors detected.

```
*****
****  SUMMARY AND STATISTICS  ****
*****
```

*** File and Product Name Information ***

```
File name from sender      = 'M0709.dwg'
File creation Date.Time    = '940228.105206'
Model change Date.Time     = ''
Author                     = 'Gary Hahn'
Department                 = ''
Product name from sender   = 'Xerox Expert'
Destination product name   = ''
```

*** Parameter Delimiters ***

Delimiter = ','
Terminator = ';'

*** Originating System Data ***

System ID = 'Xerox Expert version 5.0'
Preprocessor version = '5.0'
Specification version = 6 (IGES 4.0)

*** Precision levels ***

Integer bits = 16
Floating point - Exponent = 38 Mantissa = 7
Double precision - Exponent = 38 Mantissa = 7

*** Global Model Data ***

Model scale = 1.0000E+00
Unit flag = 1
Units = 'INCH'
Line weights = 3
Maximum line thickness = 4.166667E-02
Minimum line thickness = 1.388889E-02
Granularity = 1.000000E-05
Maximum coordinate = 1.434750E+01

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	354
	Blanked	0
Independence:	Independent	270
	Physically Subordinate	82
	Logically Subordinate	2
	Totally Subordinate	0
Entity use:	Geometry	296
	Annotation	55
	Definition	2
	Other	1
	Logical/Positional	0
	2D parametric	0
	Construction geometry	0
	Not Specified	0

Hierarchy: Structure DE applies 354
 Subordinate DE applies 0
 Hierarchy property applies 0
 Not Specified 0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
100	0	0	5	Circular arc
102	0	0	21	Composite curve
104	1	0	3	Conic arc - ellipse
110	0	0	243	Line
124	0	0	3	Transformation matrix
212	0	0	55	General note
230	0	0	21	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	354

*** Labeling Information ***

100% of the entities are labeled.

Unlabeled 0

Label	Count	Label	Count	Label	Count
View	1*	GNote	55*	Line	243*
Matrix	3*	Ellipse	3*	Arc	4*
Composit	21	Section	21*	Circle	1*
Property	1	Drawing	1*		

NITPICK 2327: One or more of the flagged entity labels are not right-justified.

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
5	21	3	-	-	216	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	5	-	-	Center-line
-	-	-	-	-	22	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

116	118	120	122	124	125	126	128	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	3	-	-	-	Solid

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	251	(0.0139)
1	103	(0.0139)

*** Colors Used in Data ***

Defaulted	48
Green	306

***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 102

ERROR 2033: End points of curves D 329 and D 331 disjoint by
7.470000E-02 at D 335.

ERROR 2033: End points of curves D 331 and D 333 disjoint by
7.223573E-02 at D 335.

ERROR 2033: Messages regarding disjoint composite curves suppressed.

*** Entity type: 104

WARNING 2265: Start point off conic by 3.283146E-04 at D 25.
WARNING 2039: End point off conic by 3.293573E-04 at D 25.
WARNING 2265: Start point off conic by 6.719460E-05 at D 29.
WARNING 2039: End point off conic by 7.028472E-05 at D 29.
WARNING 2265: Start point off conic by 3.293573E-04 at D 269.
WARNING 2039: End point off conic by 3.283146E-04 at D 269.

*** Entity type: 110

-- 243 lines averaging 5.747212E-01 units --

*** Entity type: 124

3 transformation matrices, 3 non-zero translations.
NOTE 2341: 3 matrices contain translation information.

*** Entity type: 212

55 text strings in data file.
Average text aspect ratio in file is 0.9028174.
Minimum text aspect ratio in file is 0.9006803.
Maximum text aspect ratio in file is 0.9071421.

FONTS USED IN FILE

FONT	COUNT	NAME
1	55	Default ASCII Style

*** Entity type: 230

NITPICK 2076: Entity does not have Annotation flag set at D 337.
NITPICK 2076: Entity does not have Annotation flag set at D 347.
NITPICK 2076: Messages regarding entity use (annotation) suppressed.

*** Entity type: 404

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 707.
Drawing at D 707 contains 1 views.
Drawing at D 707 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

NITPICK 2073: Entity use flag must be 1 for View entity at D 1.
Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***

2007: 40 Mathematical discontinuities.
2015: 6 Mathematically incorrect definitions.
2016: 23 Invalid entity use flag.

*** Error Summary ***

0 fatal errors
0 severe errors
40 errors
6 warnings
0 cautions
24 nitpicks
1 notes

*** End of Analysis of q016.igs ***

10.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

File: C:/TMP/Q016.xli

Date: Fri, Apr 01, 1994

Time: 16:23:47

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: C:/TMP/Q016.IGS

to AutoCAD Drawing: C:\Q016.dwg

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin
5	DOT	acad.lin

=====

Parse phase

*** Warning (IAFP_LARGER_SGL_SIG) ***

C:/TMP/Q016.IGS, line 8: IGES file has greater number of significant digits in single precision numbers than this system.

*** Warning (IEVM_LABEL_NOT_RJ) ***

(DE 1, TF 410:0) DE has an invalid label justification.

Action taken: Label has been right justified.

<<<< PART OF LOG FILE REMOVED HERE >>>>

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 23, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

<<<< PART OF LOG FILE REMOVED HERE >>>>

*** Warning (IEVM_BAD_START_POINT_104) ***

(DE 25, TF 104:1) Entity's start point not on the conic. Value found was 7.8500590e-002, 7.4898770e-002.

Action taken: Start point moved 3.2831462e-004 units, from 7.8500590e-002, 7.4898770e-002 to 7.8828905e-002, 7.4898770e-002.

*** Warning (IEVM_BAD_END_POINT_104) ***

(DE 25, TF 104:1) Entity's End Point not on the conic. Value found was -7.8498940e-002, 7.4899380e-002.

Action taken: End point moved 3.2935729e-004 units, from -7.8498940e-002, 7.4899380e-002 to -7.8828297e-002, 7.4899380e-002.

<<<< PART OF LOG FILE REMOVED HERE >>>>

=====

Start Section:

Drawing name: M0709.dwg. This file was converted by Expert.
Compliant with CALS class 1, per MIL-D-28000 Amendment 1.

DATE: 28-Feb-94 10:52:06

Global Section:

Parameter Delimiter: ,
Record Delimiter: ;
Sending Product ID: Xerox Expert
File Name: M0709.dwg
System ID: Xerox Expert version 5.0
Preprocessor Version: 5.0
Size of Integer: 16
Sgl. Precision Mag: 38
Sgl. Precision Sig: 7
Dbl. Precision Mag: 38
Dbl. Precision Sig: 7
Receiving Product ID:
Model Space Scale: 1.000000
Unit Flag: 1
Unit String: INCH
of Line Weights: 3
Maximum Line Width: 0.041667
Creation Date: 02/28/94 10:52:06
Minimum Resolution: 0.000010
Maximum Coordinate: 14.347500
Author: Gary Hahn
Organization:
IGES Version Number: 6
Drafting Standard: 0

Entity Summary:

Type	Form	Description	Count
100	0	Circular Arc	5
102	0	Composite Curve	21
104	1	Ellipse	3
110	0	Line	243
124	0	Transformation Matrix	3
212	0	General Note (Simple)	55
230	0	Section Area (Standard Fill)	21
404	0	Drawing (form 0)	1
406	16	Property (Drawing Size)	1
410	0	View	1
Total			354

=====

Translation phase

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 521, TYPE: 230, FORM: 0

Drawing Entity (404 Form 0) at DE 707, with

name = ,
size = 8.792000, 5.166600,
units = IN,

was processed in the AutoCAD drawing file: C:\Q016.dwg

*** Warning (ACAD_NEW_VIEW_VOLUME_GENERATED) ***

(DE: 1 TF: 410:0)

A new view volume has been generated for the view with:

XMIN (-1.547906), XMAX (15.684406),
YMIN (-1.547906), YMAX (7.853506),
ZMIN (-1.547906), ZMAX (1.547906).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
100	0	Circular Arc	6	6	0
102	0	Composite Curve	22	22	0
104	1	Ellipse	3	3	0
110	0	Line	183	183	0
212	0	General Note (Simple)	55	55	0
230	0	Section Area (Standard Fill)	21	21	0
404	0	Drawing (form 0)	1	1	0
406	16	Property (Drawing Size)	1	1	0
410	0	View	1	1	0
Totals			293	293	0

AutoCAD Entity Summary

Entity	Created	Errors
LINE	183	0
CIRCLE	2	0
TEXT	55	0
ARC	4	0
SOLID	20	0
INSERT	2	0
POLYLINE	3	0
BLOCK	3	0
Totals	272	0

=====
Error Summary:

The following message was issued 1 time(s)
IGES file has greater number of significant digits in single precision numbers
than this system.

The following message was issued 332 time(s)
DE has an invalid label justification.

The following message was issued 3 time(s)
Entity's start point not on the conic. Value found was %.7e, %.7e.

The following message was issued 3 time(s)
Entity's End Point not on the conic. Value found was %.7e, %.7e.

The following message was issued 3 time(s)
Entity has a column which is not a unit vector.

The following message was issued 1 time(s)
Internal error %d approximating curve at DE: %d, TYPE: %d, FORM: %d

The following message was issued 1 time(s)
A new view volume has been generated for the view with:
XMIN (%lf), XMAX (%lf),
YMIN (%lf), YMAX (%lf),
ZMIN (%lf), ZMAX (%lf).

Status: 0
Warning: 343
Error: 1
Fatal: 0

Elapsed Time:

Processor: 00:00:08
Clock: 00:00:09
=====

10.1.3 Parser Log - IGESWorks

IGES/Works v1.4.1
International TechneGroup Incorporated
Validation Logfile

Date: April 01, 1994
Model: q016

***** Validation Parameters *****

TOLERANCE CONFIGURATION VALUES

ZERO_TOL	= 1.000000e-13
MODEL_SPACE_PNT_COIN_TOL	= 1.000000e-03
PARM_SPACE_PNT_COIN_TOL	= 1.000000e-08
ISO_PARM_CURVE_TOL	= 1.000000e-08
NON_CONV_TOL	= 1.000000e-12
KNOT_COIN_TOL	= 1.000000e-10
SAME_INTER_TOL	= 1.000000e-12
PARALLEL_LINES_TOL	= 1.000000e-07
ANGLE_COIN_TOL	= 1.000000e-05
PNT_PROJ_TOL	= 1.000000e-07
COLIN_TOL	= 1.000000e-07
COPLANAR_TOL	= 1.000000e-08
ZERO_NORMAL_TOL	= 1.000000e-06
SAME_TANGENT_TOL	= 1.000000e-04
SAME_CURVATURE_TOL	= 1.000000e-04
SAME_DERIVATIVE_TOL	= 1.000000e-03
MODEL_LINEAR_APPROX_TOL	= 2.220446e-16

***** Entity Listing Before Validation *****

Count	Type	Form	Description
----	----	----	-----
5	100	0	Circular Arc
21	102	0	Composite Curve
3	104	1	Ellipse
243	110	0	Line
3	124	0	Transformation Matrix
55	212	0	General Note (Simple)
21	230	0	Section Area (Standard Fill)
1	404	0	Drawing (form 0)
1	406	16	Property (Drawing Size)
1	410	0	View

354 - Number of entities in selection list

***** Entity Validation *****

*** Warning (IEVM_LABEL_NOT_RJ) ***

(DE 1, TF 410:0) The Label Display field in this entity's DE section was not set for right justification.

Action taken: The Label Display field has been set to be right-justified.

<<<< PART OF LOG FILE REMOVED HERE >>>>

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 23, TF 124:0) This Transformation Matrix entity (124) has a a column that is not a unit vector within the stated tolerance.

Action taken: All vectors have been unitized.

*** Warning (IEVM_BAD_START_POINT_104) ***

(DE 25, TF 104:1) The start point for this Conic Arc entity (104) is not on the conic. Start point value found was 7.8500590e-02, 7.4898770e-02.

Action taken: The start point has been moved 3.2831462e-04 units, from 7.8500590e-02, 7.4898770e-02 to 7.8828905e-02, 7.4898770e-02.

*** Warning (IEVM_BAD_END_POINT_104) ***

(DE 25, TF 104:1) The end point for this Conic Arc entity (104) is not on the conic. Start point value found was -7.8498940e-02, 7.4899380e-02.

Action taken: The end point has been moved 3.2935729e-04 units, from -7.8498940e-02, 7.4899380e-02 to -7.8828297e-02, 7.4899380e-02.

<<<< PART OF LOG FILE REMOVED HERE >>>>

*** Warning (IEVM_NON_CONTINUOUS_102) ***

(DE 335, TF 102:0) This Composite Curve entity (102) is not continuous within the stated tolerance. The terminate point of the first curve does not equal the start point of the next curve.

Action taken: The curve was made continuous by the following actions.

DE 329 was reversed. DE 331 was reversed. DE 333 was reversed.

<<<< PART OF LOG FILE REMOVED HERE >>>>

Entity Validation Summary:

Type	Form	Entity Count	Number Valid	Number of Corrected		Number of Uncorrected	
				Warnings	Errors	Warnings	Errors
Global Section		1	1	0	0	0	0
100	0	5	0	5	0	0	0
102	0	21	1	0	20	0	0
104	1	3	0	3	6	0	0
110	0	243	0	243	0	0	0
124	0	3	0	3	3	0	0
212	0	55	0	55	0	0	0
230	0	21	0	21	0	0	0
404	0	1	0	1	0	0	0
406	16	1	1	0	0	0	0
410	0	1	0	1	0	0	0
Totals:		355	3	332	29	0	0

The following message was issued and suppressed 327 times:

The Label Display field in this entity's DE section was not set for right justification.

The following message was issued and suppressed 15 times:

This Composite Curve entity (102) is not continuous within the stated tolerance. The terminate point of the first curve does not equal the start point of the next curve.

A message is suppressed when it has been issued more than 5 times. This value is controlled by the 'MAX_MESSAGE' configuration parameter.

10.1.4 Preview Error Log

ERROR REPORT FOR FILE /novell/94025/q016.igs

>> File record length is 80

Terminate section report :

File Section	#lines
START	5
GLOBAL	3
DIRECTORY ENTRY	708
PARAMETER DATA	415
TERMINATE	1
TOTAL	1132

(Expect 80 X 1132 = 90560 bytes)

----- preliminary format scan complete -----

>> WARNING: Sectioned Area type 19 not supported
: Reading entity #169, DE entry #337 type SECTIONED AREA.
: Field 2, line 230 of PARAMETER DATA section.
230,335,19,0.0,0.0,0.0,0.125,0.0,0,0,0; 00000337P0000230110
^^

>> WARNING: Sectioned Area type 19 not supported
: Reading entity #174, DE entry #347 type SECTIONED AREA.
: Field 2, line 235 of PARAMETER DATA section.
230,345,19,0.0,0.0,0.0,0.125,0.0,0,0,0; 00000347P0000235110
^^

<<<< PART OF LOG FILE REMOVED HERE >>>>

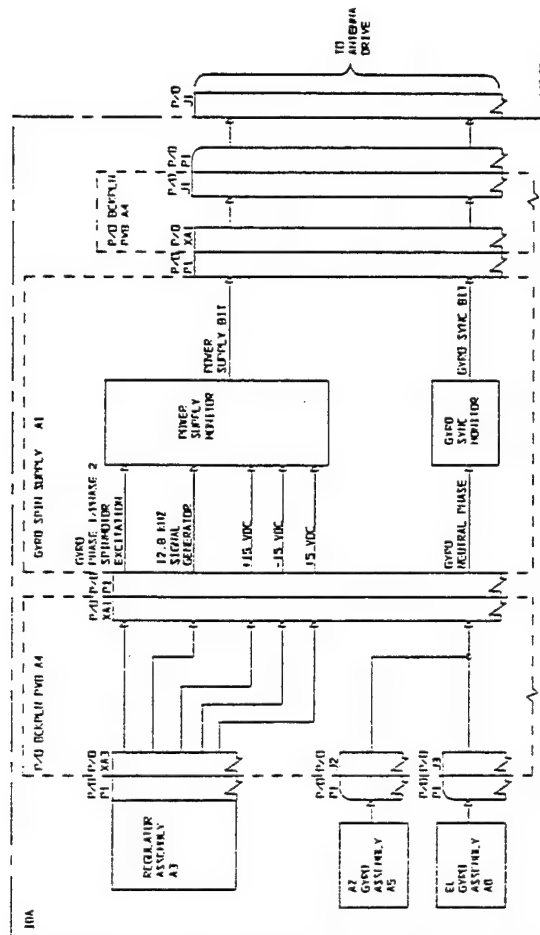
>> WARNING: Invalid line font from IGES file.
: Font #5 is replaced by #1.

>> WARNING: Unsupported sectioned area type 19 modified to 16
: in entity 169 for graphic output.

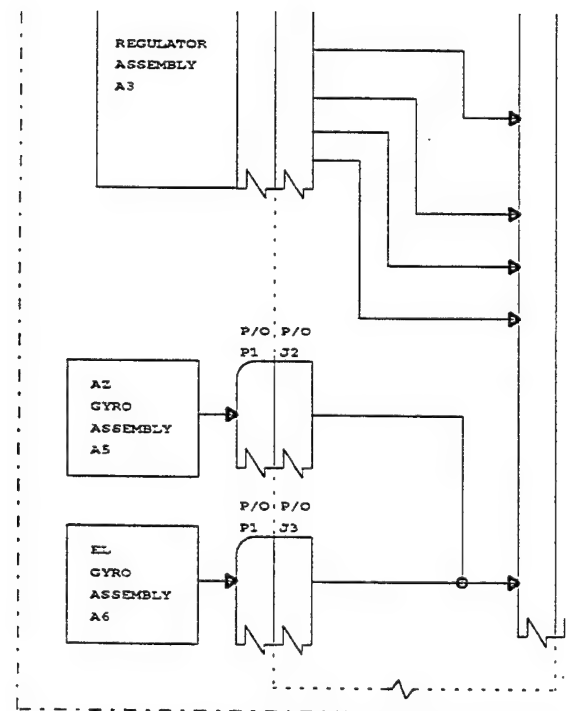
<<<< PART OF LOG FILE REMOVED HERE >>>>

Found 0 errors and 43 warnings

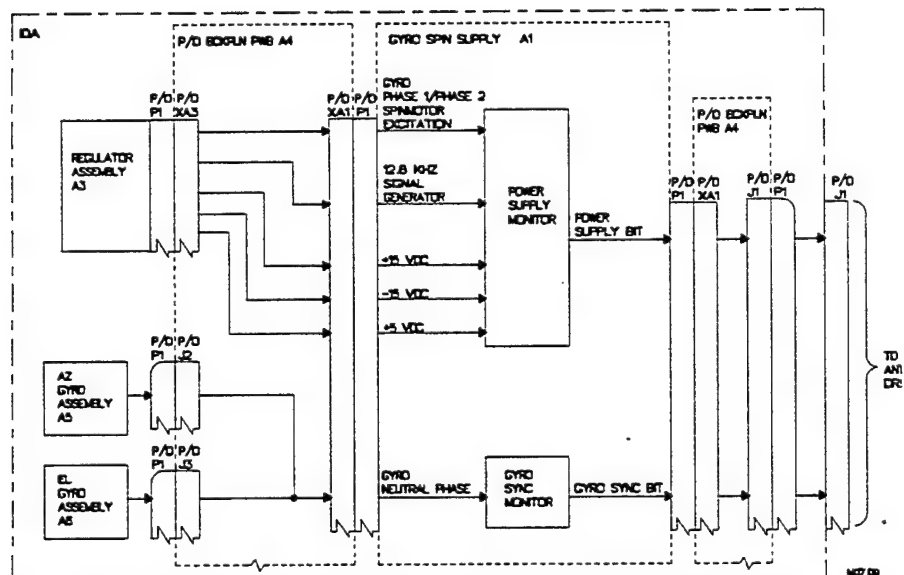
10.1.5 Output Cadkey v6.0



10.1.6 Output CADLeaf



10.1.7 Output IGESView

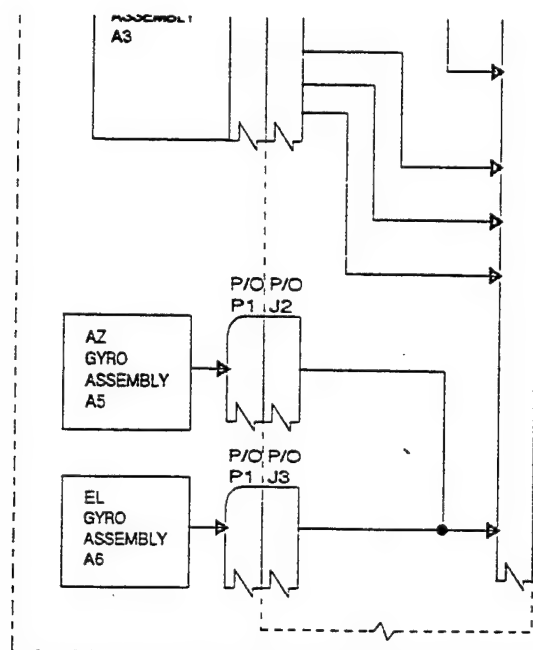


The diagram illustrates the architecture of the T-1000 computer system. It is divided into several functional sections:

- Input Section:** Includes a 'TELETYPE UNIT' and a 'PUNCH UNIT'. Both are connected to a 'PUNCH UNIT' which feeds into a 'PUNCH UNIT'.
- Processing Section:** The 'PUNCH UNIT' connects to a 'PUNCH UNIT' which then feeds into a 'PUNCH UNIT'. This section also includes a 'PUNCH UNIT' and a 'PUNCH UNIT'.
- Output Section:** The 'PUNCH UNIT' connects to a 'PUNCH UNIT' which then feeds into a 'PUNCH UNIT'. This section also includes a 'PUNCH UNIT' and a 'PUNCH UNIT'.
- Control Section:** Includes a 'PUNCH UNIT' and a 'PUNCH UNIT'.

The diagram shows the flow of data from input devices through the processing units to output devices, with various control and monitoring components integrated throughout the system.

10.1.9 Output iges2draw/IslandDraw



i2d/id
q016

11. Appendix C - Detailed SGML Analysis

11.1 Parser Log

SGML Document Type Definition Parser
An SGML System Conforming to
International Standard ISO 8879
Standard Generalized Markup Language

Log file: '9425.LOG'
SDO File: 'ctnddecl.sdo'
Namecase General is yes.
Namecase Entity is no.
Parsing DTD file: '9425.dtd'
Parsing DOCTYPE TM

DTD0137: Incorrect token ']]>'. Parser Ignoring Input Up To Next MDO.
In declaration: '<![['.
In declaration: '<!DOCTYPE'.
in entity 'atos'
in line 47 in file 'c:\xgml\bspec.dtd'
in line 42 in file '9425.dtd'
DTD0019: DOCTYPE or LINKTYPE end found in external entity file.
.DTO file not created due to parsing errors.

Program status code: 19.

11.2 Exoterica XGMLNormalizer Parser

No reported errors or warnings.

11.3 Exoterica Validator

No reported errors or warnings.

11.4 Sema Mark-it Log

No reported errors or warnings.

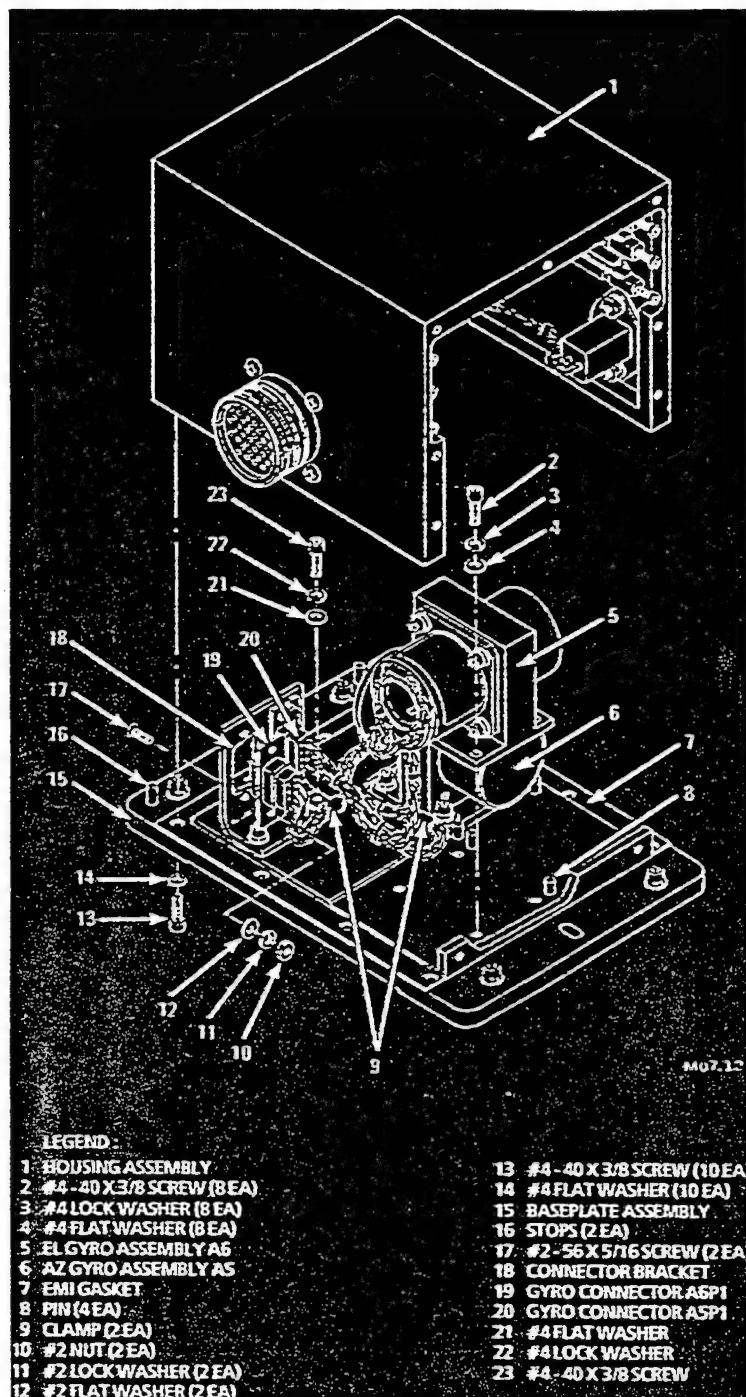
11.5 Public Domain sgmls Log

No reported errors or warnings.

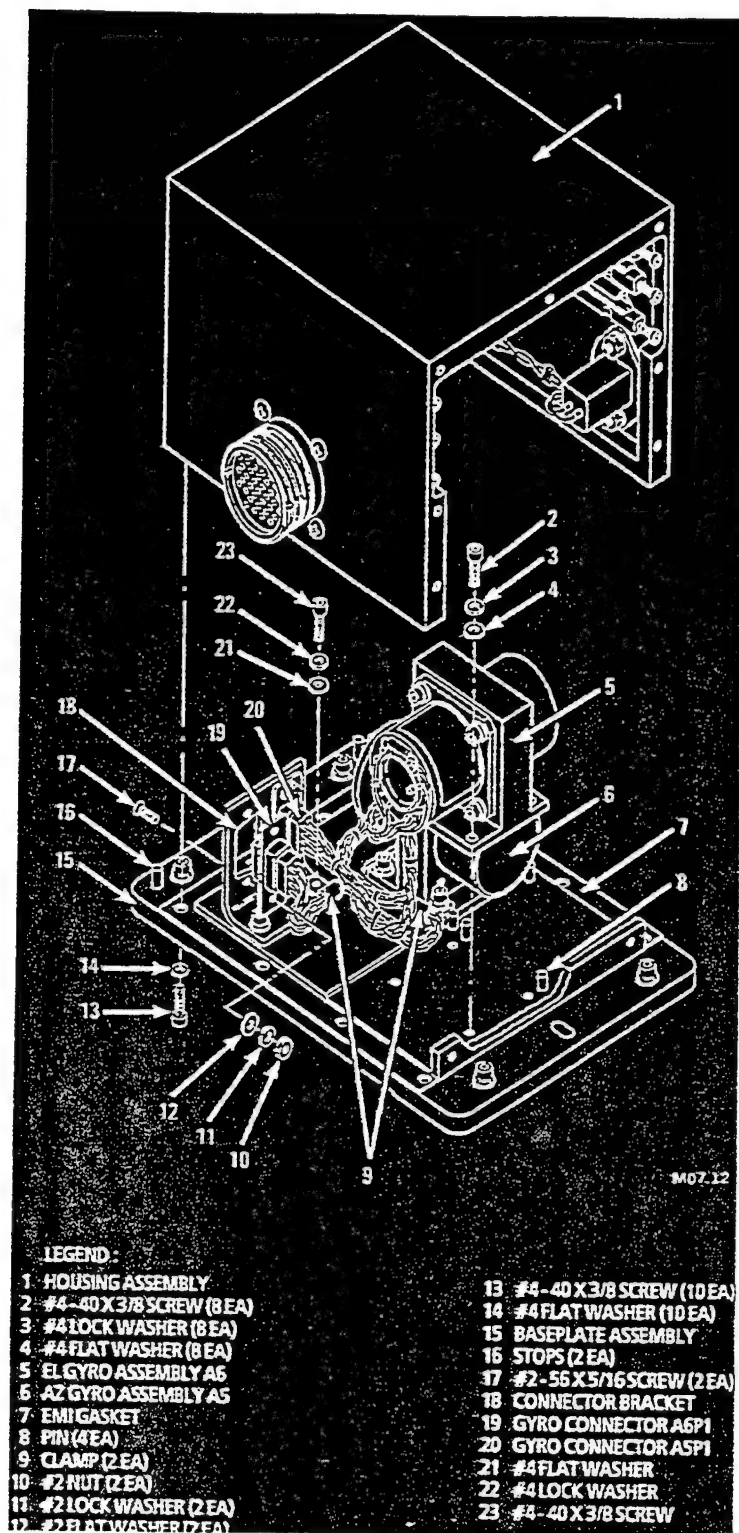
12. Appendix D - Detailed Raster Analysis

12.1 File D001R024

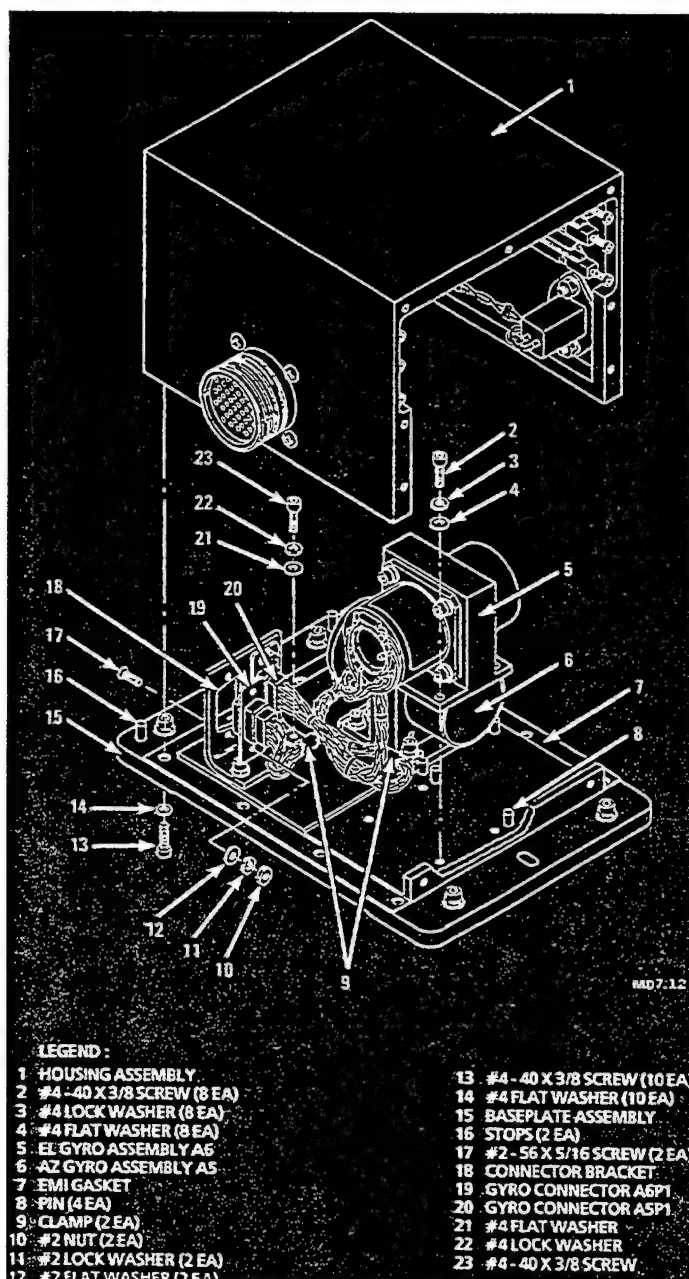
12.1.1 Output HiJaak Pro



12.1.2 Output g42tiff/IslandPaint



12.1.3 Output IGESView



13. Appendix E - Detailed CGM Analysis

13.1 File D001C001

13.1.1 Parser Log MetaCheck

MetaCheck Version 2.10 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-93 CGM Technology Software
Execution Date: 04/01/94 Time: 17:05:13

Metafile Examined : i:\94025\c001.cgm

Pictures Examined : All
Elements Examined : All
Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

No Errors Detected

===== CALS CGM Profile (MIL-D-28003) Report =====

No profile discrepancies detected.

===== Conformance Summary Report =====

MetaCheck Version 2.10 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-93 CGM Technology Software
Execution Date: 04/01/94 Time: 17:05:15

Name of CGM under test: i:\94025\c001.cgm
Encoding : Binary

Pictures Examined : All
Elements Examined : All
Bytes Examined : All

BEGIN METAFILE string : >esdcau<
METAFILE DESCRIPTION : >AUTO-TROL/REL-1.0 MIL-D-28003/BASIC-<
>1<

Picture 1 starts at octet offset 124: >esdcau<

Conformance Summary : This file conforms to the CGM specification.
This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

1 Pictures Tested
88 Elements Tested
1212 Octets Tested

```
=====
|   No Errors Were Detected   |
=====
```

===== End of Conformance Report =====

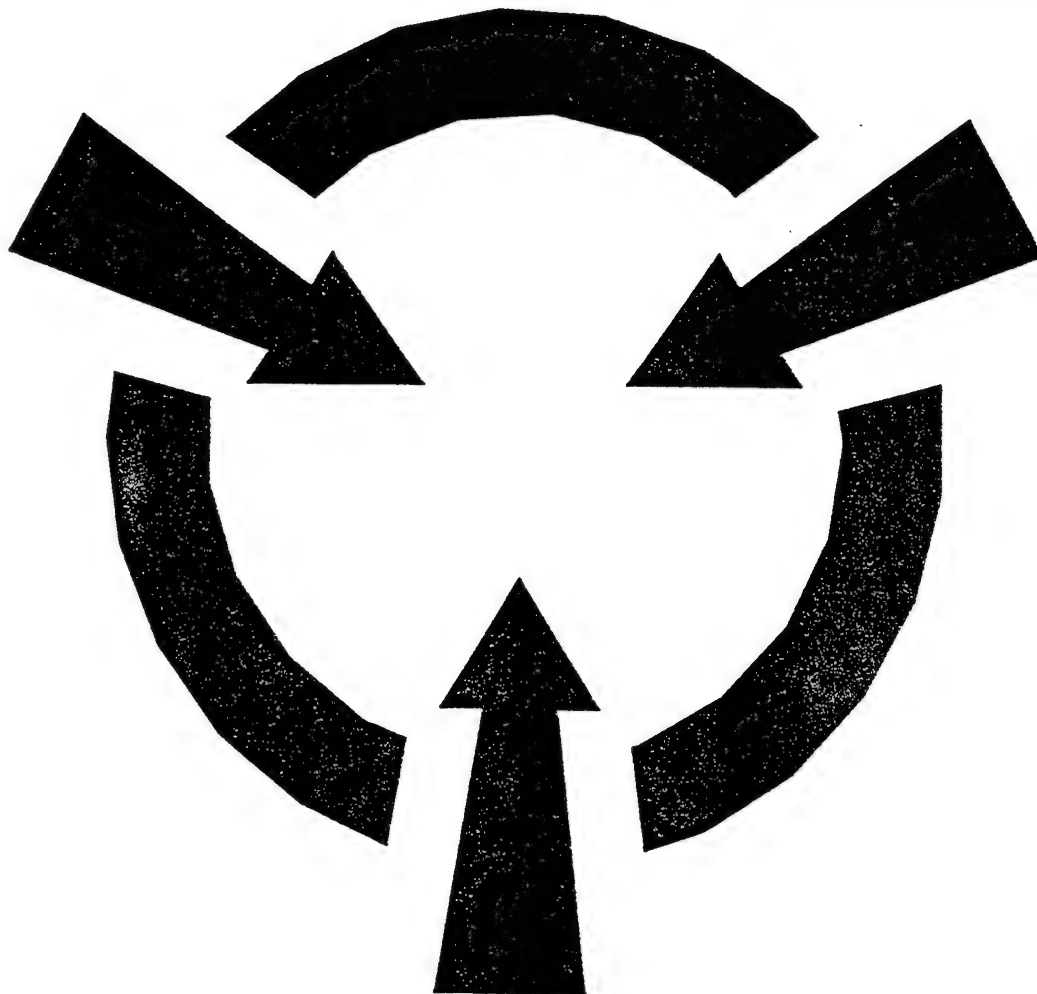
13.1.2 validcgm Log

Analysis for file c001.cgm using table table

(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 11) occurred 1 time
(1, 13) occurred 1 time
(2, 1) occurred 1 time
(2, 3) occurred 1 time
(2, 4) occurred 1 time
(2, 5) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(4, 1) occurred 34 times
(4, 4) occurred 1 time
(4, 7) occurred 6 times
(5, 3) occurred 2 times
(5, 10) occurred 1 time
(5, 15) occurred 1 time
(5, 16) occurred 1 time
(5, 18) occurred 1 time
(5, 22) occurred 1 time
(5, 28) occurred 1 time
(5, 30) occurred 1 time
(5, 34) occurred 20 times

13.1.3 Output CADLeaf

CAUTION



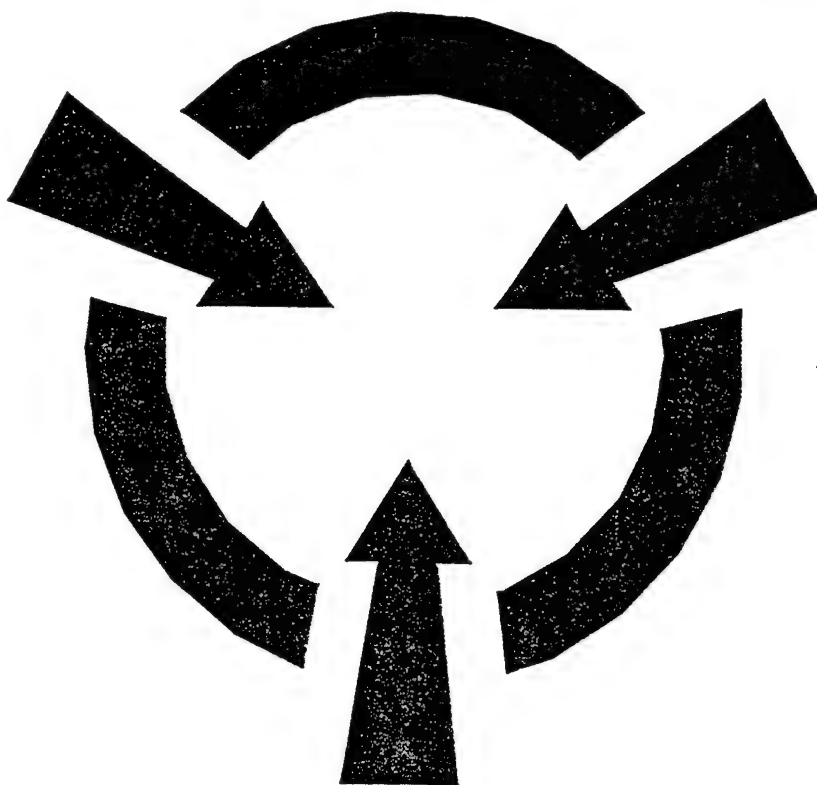
13.1.4 Output cgm2draw/IslandDraw

CAUTION



13.1.5 Output Designer

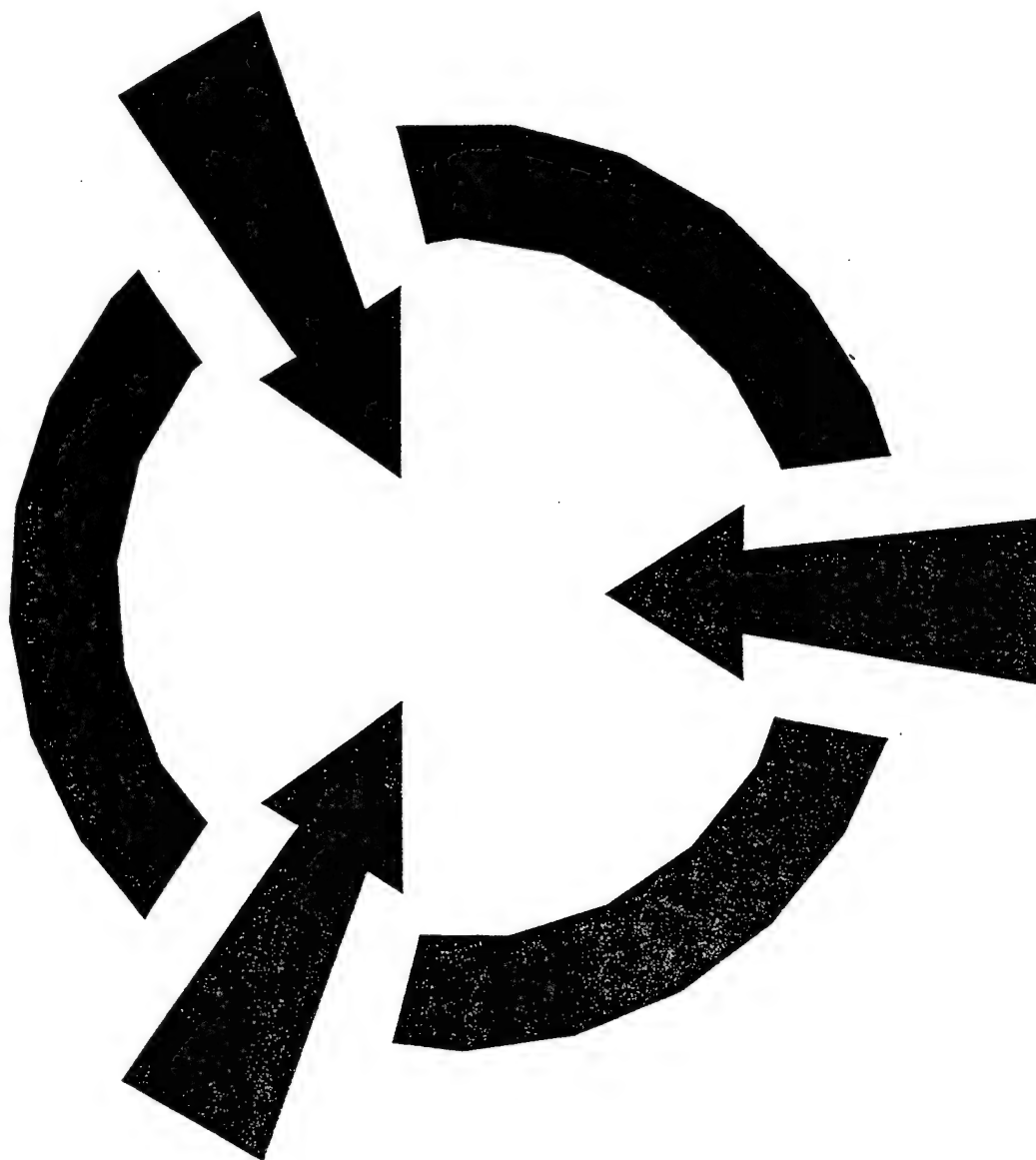
CAUTION



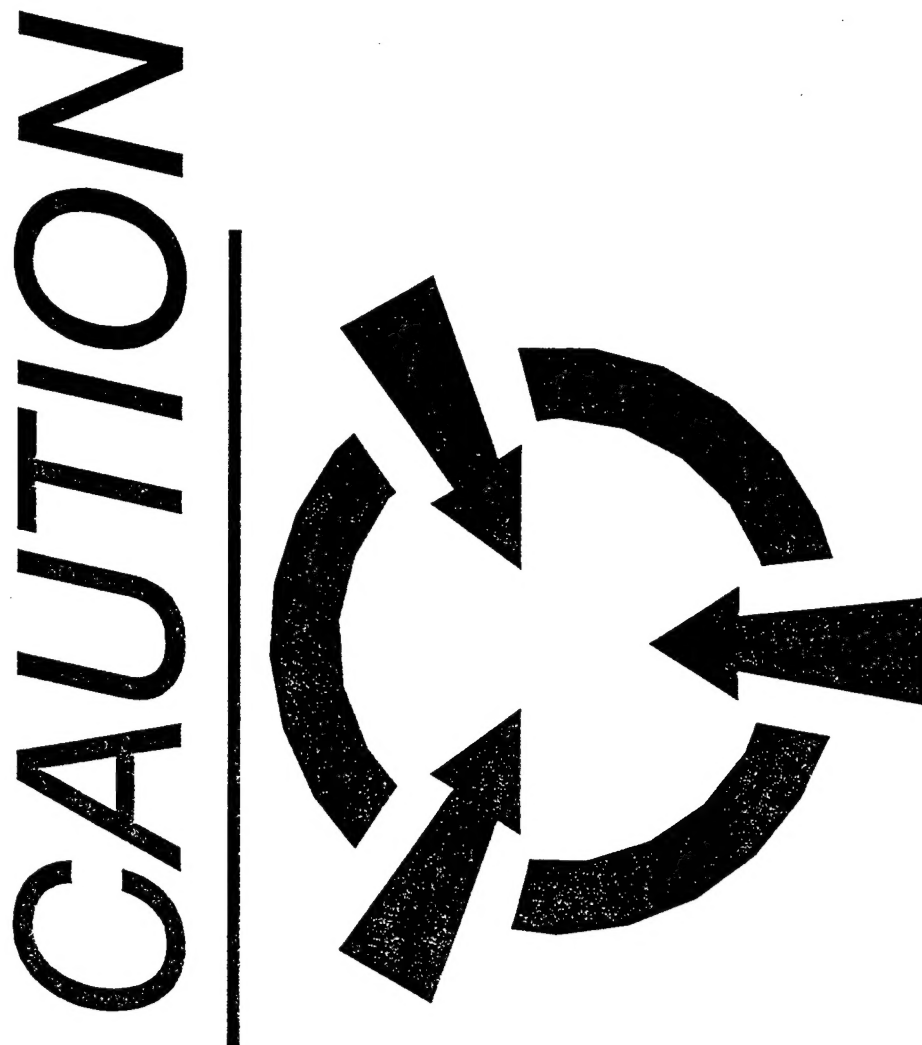
Designer 4.0
C001

13.1.6 Output Freelance

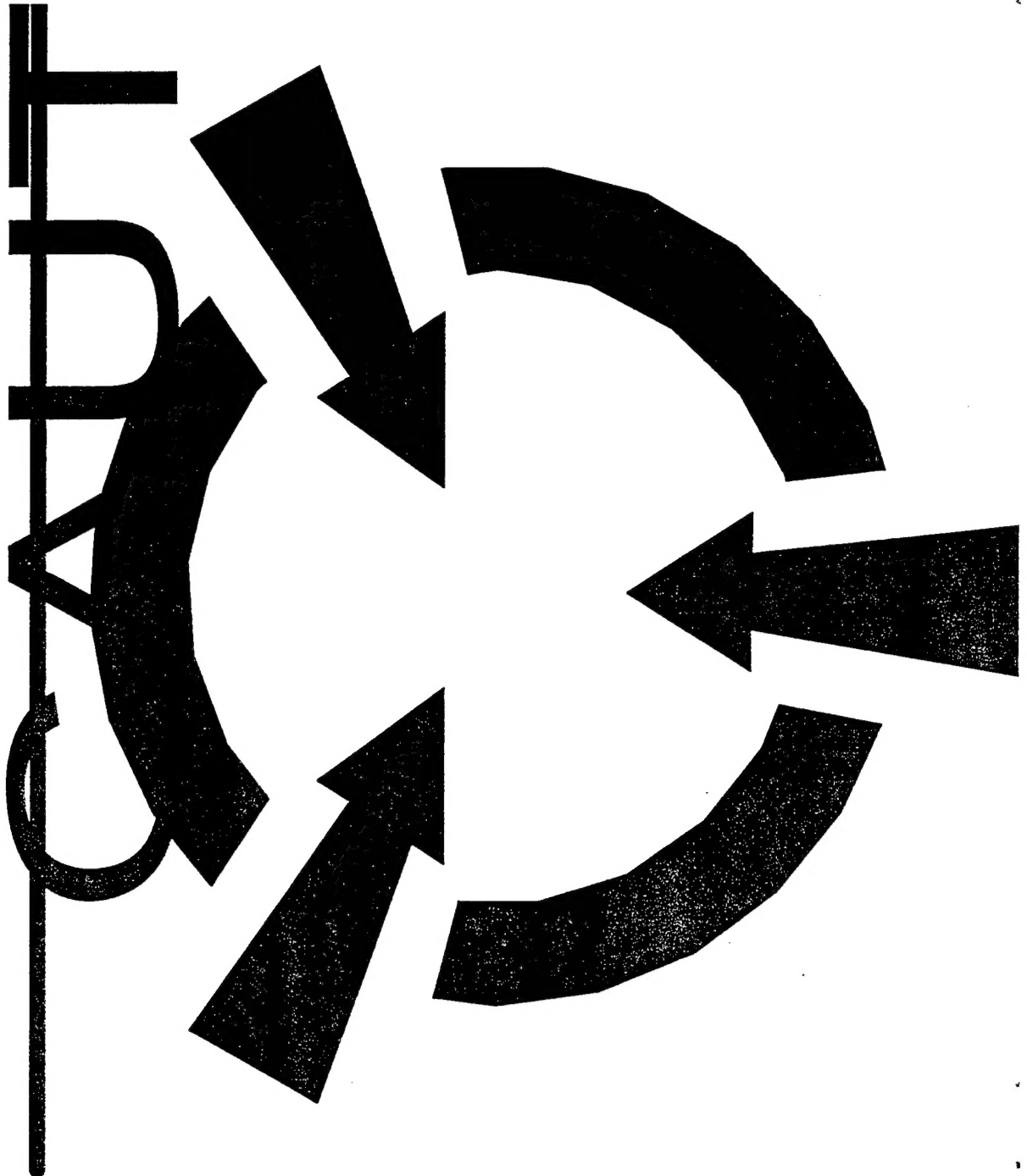
CAUTION



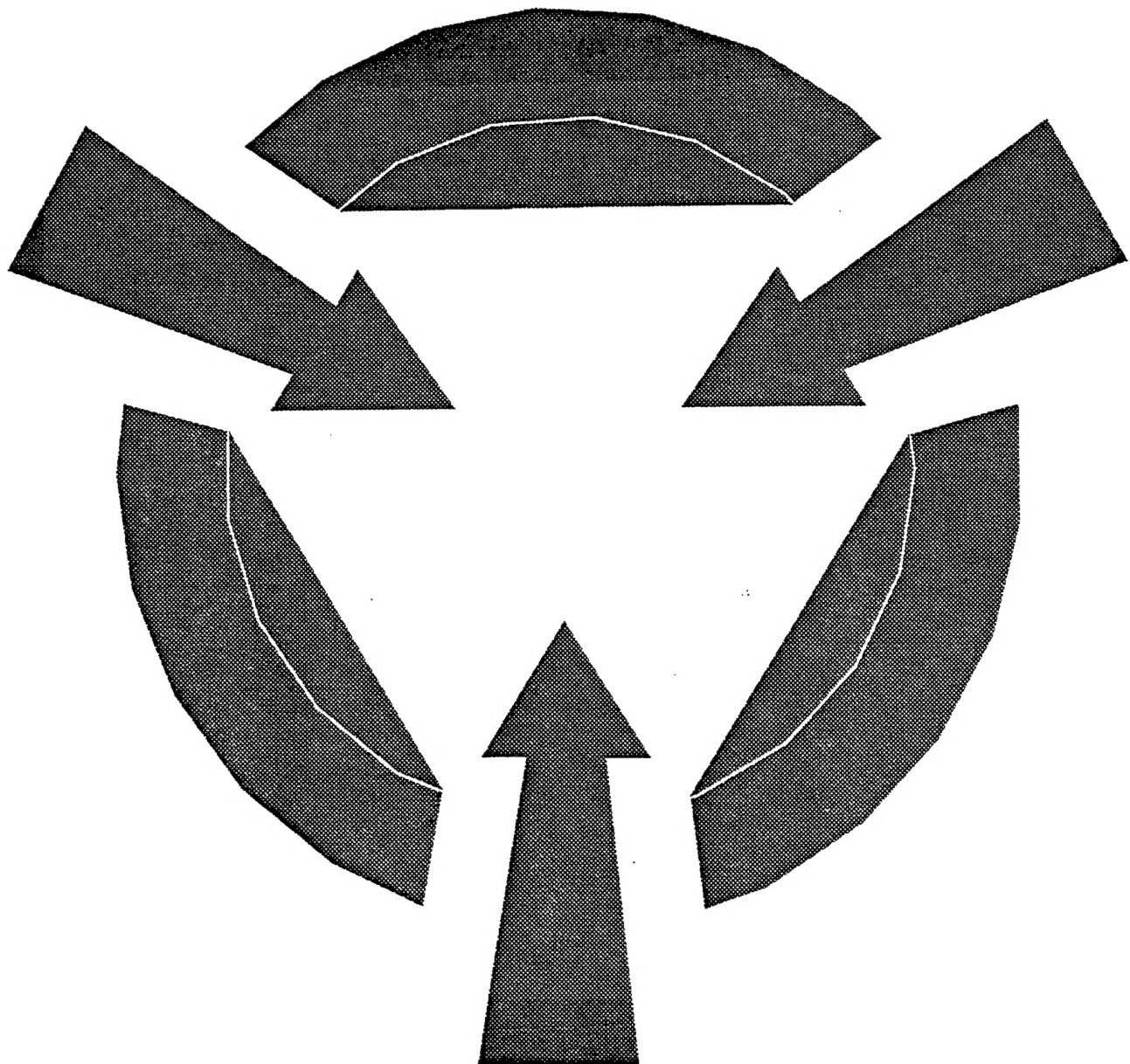
13.1.7 Output Harvard Graphics



13.1.8 Output HiJaak Pro



13.1.9 Output IslandDraw v4.0



13.1.10 Output Ventura Publisher

CAUTION

